OIPE IAP71
OCT 21 2005
PATENT & TRADEMARK OFFICE

[Name of Document] DRAWINGS

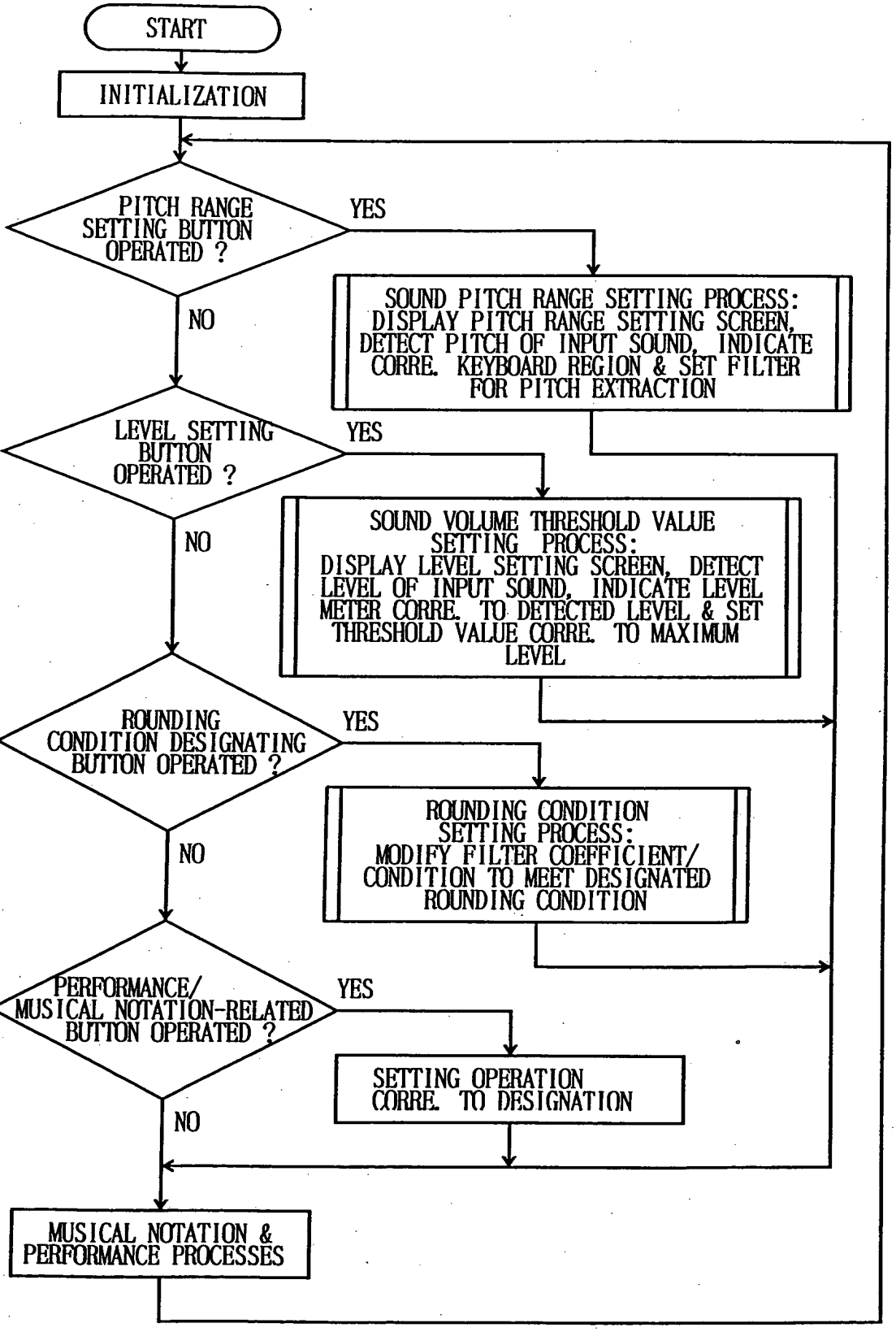


FIG. 1

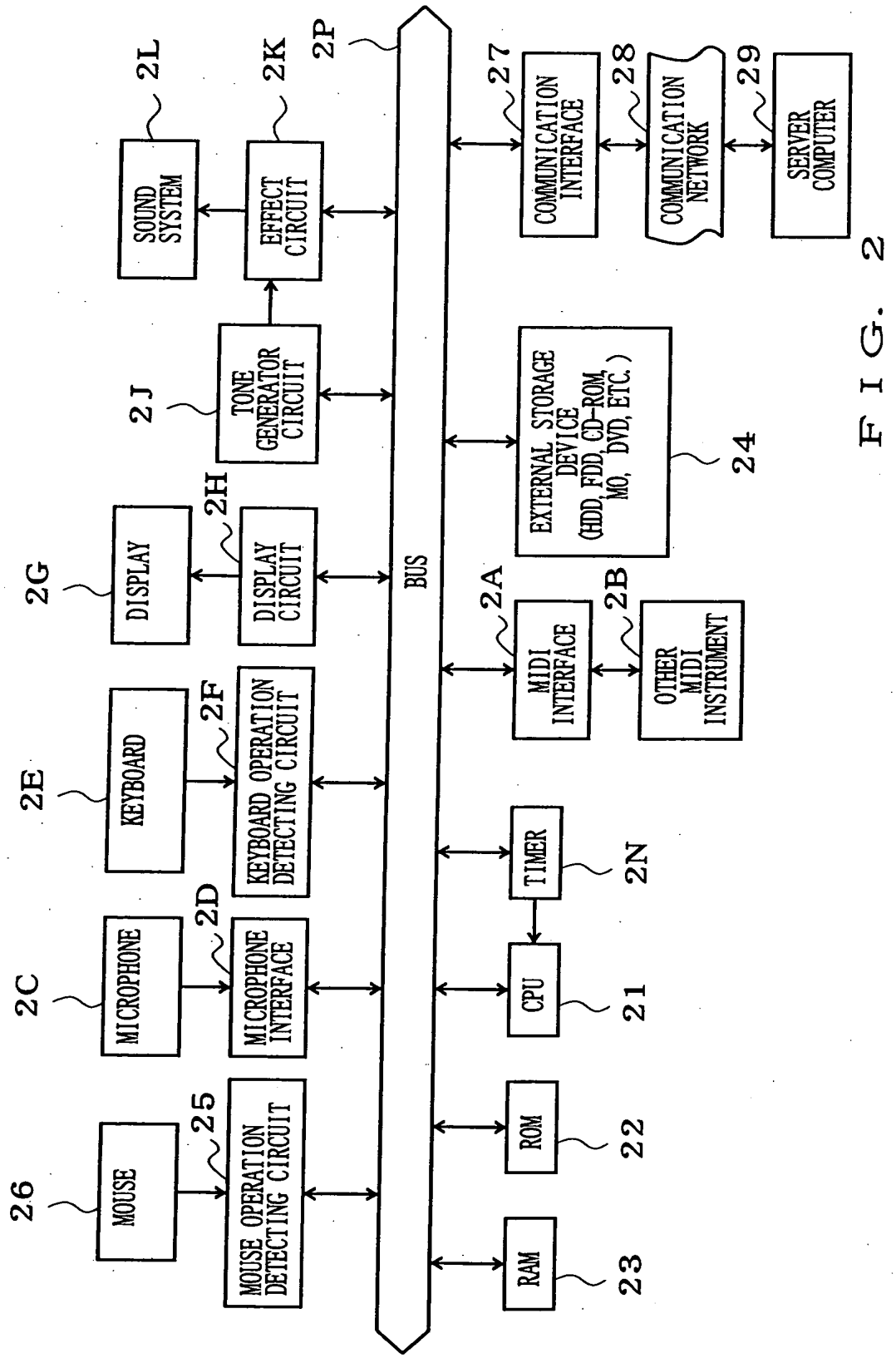

BUS
CPU
21
ROM
22
RAM
23
TIMER
2N
MOUSE
26
MOUSE OPERATION DETECTING CIRCUIT
25
MICROPHONE
2C
MICROPHONE INTERFACE
2D
KEYBOARD
2E
KEYBOARD OPERATION DETECTING CIRCUIT
2F
DISPLAY
2G
DISPLAY CIRCUIT
2H
TONE GENERATOR CIRCUIT
2J
SOUND SYSTEM
2L
EFFECT CIRCUIT
2K
2P
MIDI INTERFACE
2A
OTHER MIDI INSTRUMENT
2B
EXTERNAL STORAGE DEVICE (HDD, FDD, CD-ROM, MO, DVD, ETC.)
24
COMMUNICATION INTERFACE
27
COMMUNICATION NETWORK
28
SERVER COMPUTER
29

FIG. 2

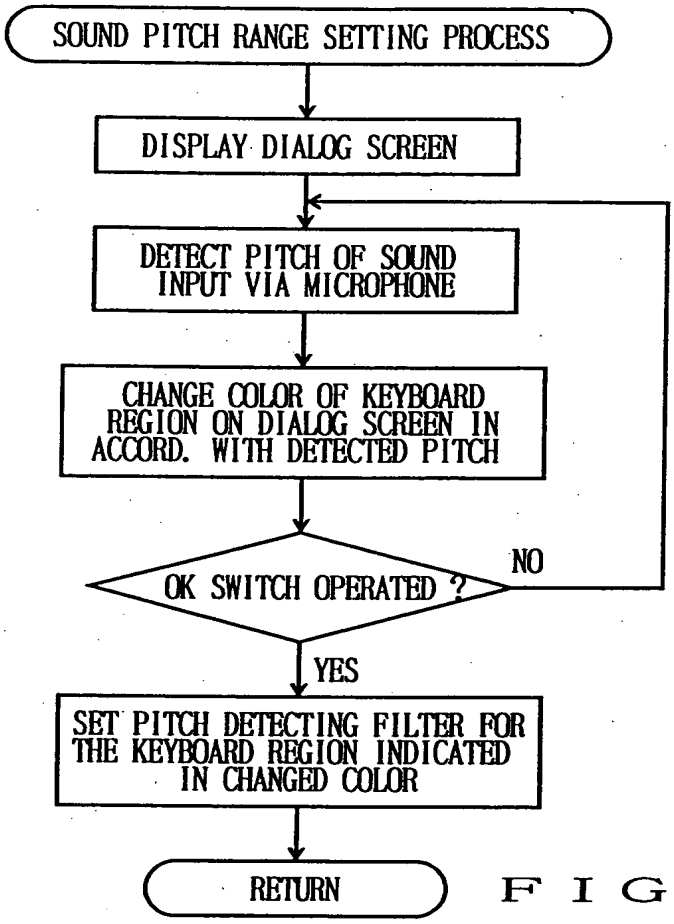

SOUND PITCH RANGE SETTING PROCESS
DISPLAY DIALOG SCREEN
DETECT PITCH OF SOUND INPUT VIA MICROPHONE
CHANGE COLOR OF KEYBOARD REGION ON DIALOG SCREEN IN ACCORD. WITH DETECTED PITCH
OK SWITCH OPERATED ?
NO
YES
SET PITCH DETECTING FILTER FOR THE KEYBOARD REGION INDICATED IN CHANGED COLOR
RETURN

FIG. 3

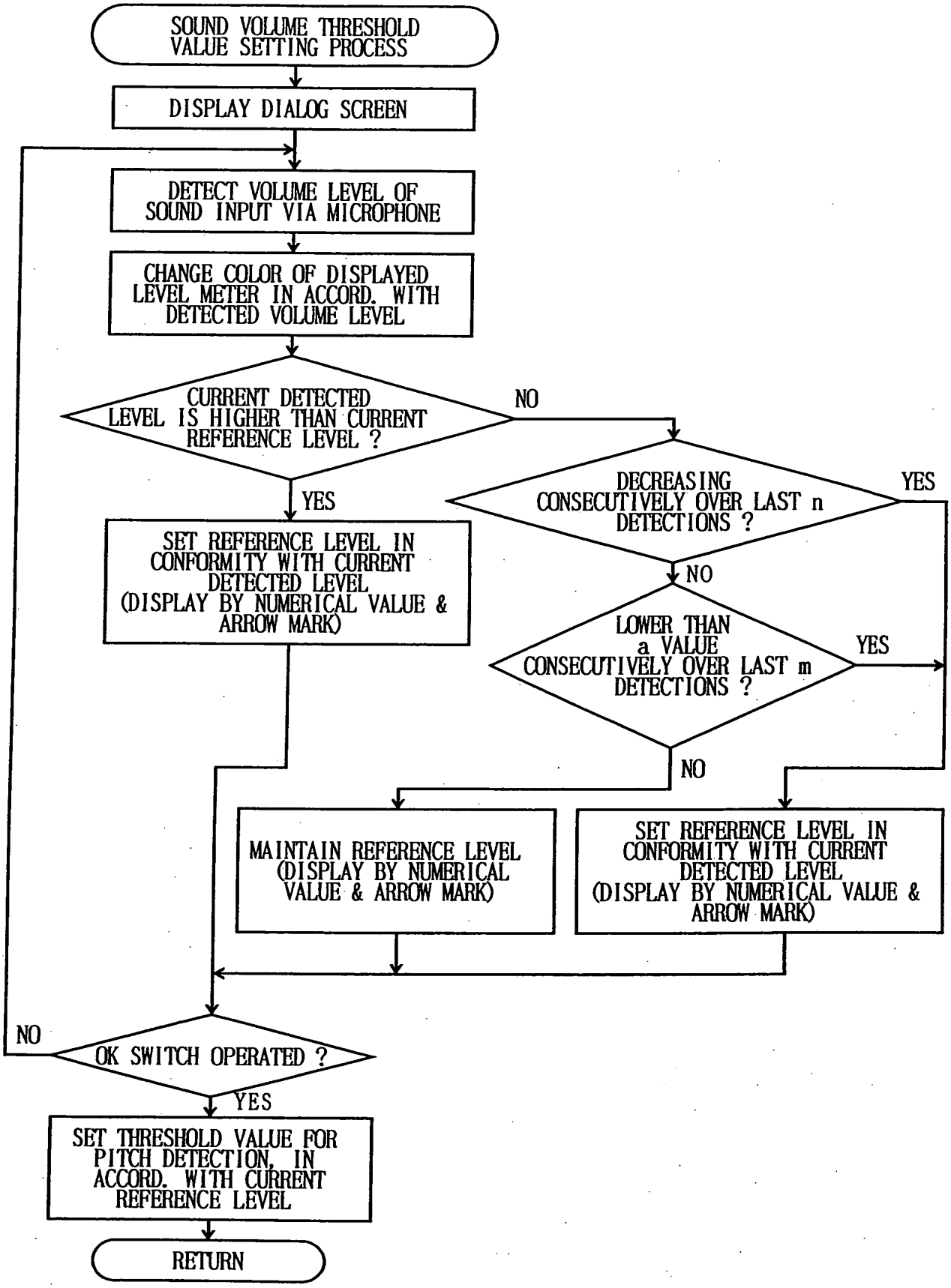

SOUND VOLUME THRESHOLD VALUE SETTING PROCESS
DISPLAY DIALOG SCREEN
DETECT VOLUME LEVEL OF SOUND INPUT VIA MICROPHONE
CHANGE COLOR OF DISPLAYED LEVEL METER IN ACCORD. WITH DETECTED VOLUME LEVEL
CURRENT DETECTED LEVEL IS HIGHER THAN CURRENT REFERENCE LEVEL ?
NO
YES
SET REFERENCE LEVEL IN CONFORMITY WITH CURRENT DETECTED LEVEL (DISPLAY BY NUMERICAL VALUE & ARROW MARK)
DECREASING CONSECUTIVELY OVER LAST n DETECTIONS ?
YES
NO
LOWER THAN a VALUE CONSECUTIVELY OVER LAST m DETECTIONS ?
YES
NO
MAINTAIN REFERENCE LEVEL (DISPLAY BY NUMERICAL VALUE & ARROW MARK)
SET REFERENCE LEVEL IN CONFORMITY WITH CURRENT DETECTED LEVEL (DISPLAY BY NUMERICAL VALUE & ARROW MARK)
NO
OK SWITCH OPERATED ?
YES
SET THRESHOLD VALUE FOR PITCH DETECTION, IN ACCORD. WITH CURRENT REFERENCE LEVEL
RETURN

FIG. 4

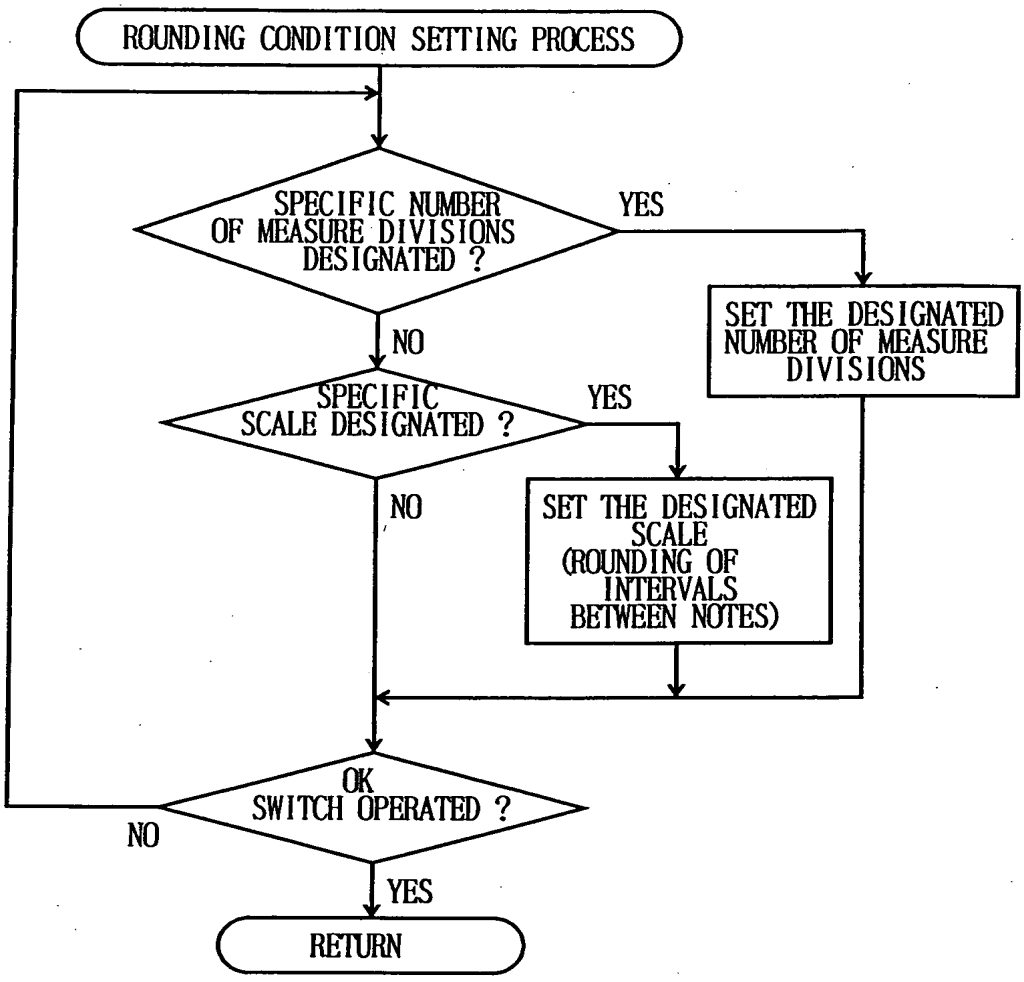

ROUNDING CONDITION SETTING PROCESS
SPECIFIC NUMBER OF MEASURE DIVISIONS DESIGNATED ?
YES
NO
SET THE DESIGNATED NUMBER OF MEASURE DIVISIONS
SPECIFIC SCALE DESIGNATED ?
YES
NO
SET THE DESIGNATED SCALE (ROUNDING OF INTERVALS BETWEEN NOTES)
OK SWITCH OPERATED ?
NO
YES
RETURN

FIG. 5

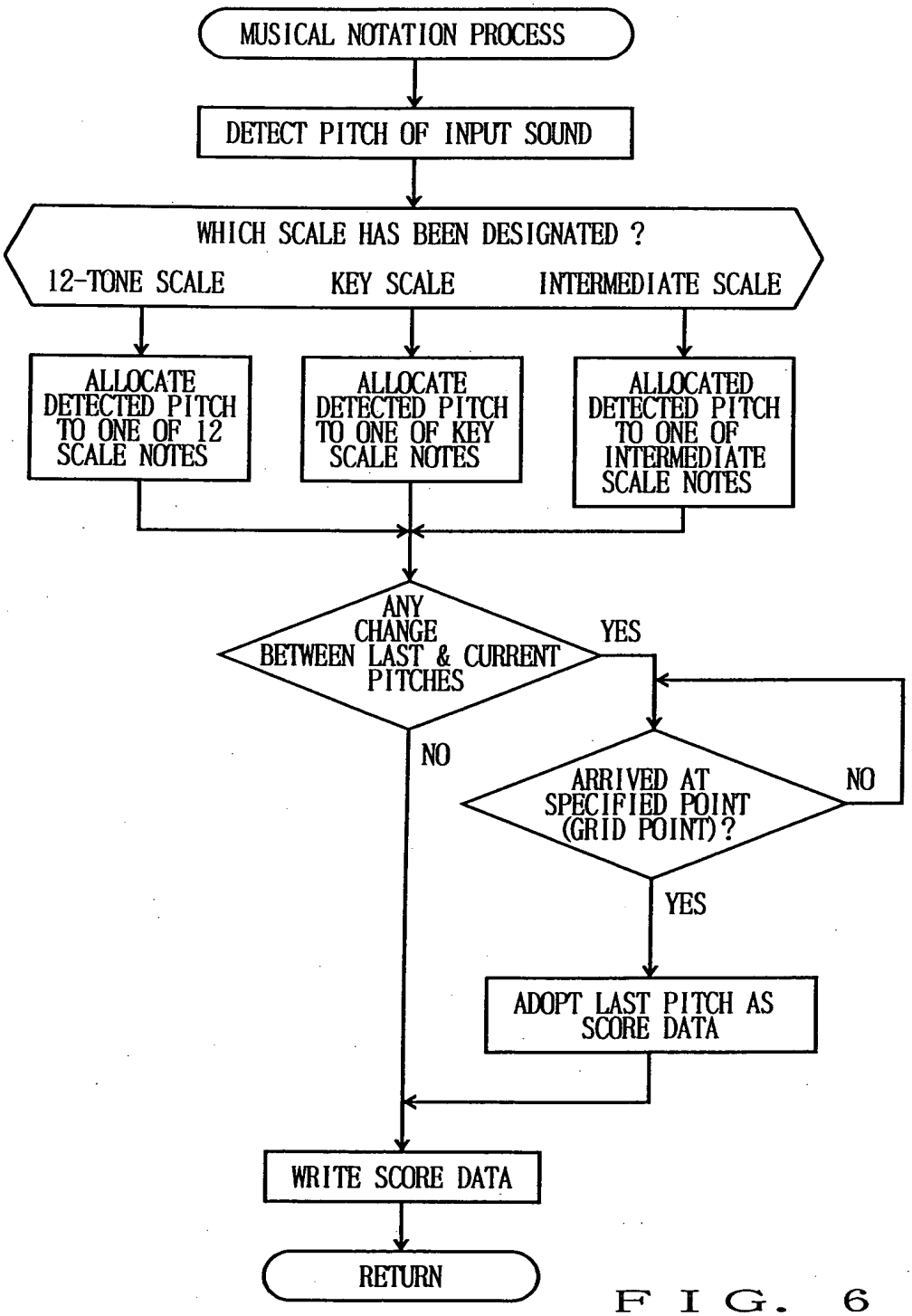

MUSICAL NOTATION PROCESS
DETECT PITCH OF INPUT SOUND
WHICH SCALE HAS BEEN DESIGNATED ?
12-TONE SCALE
KEY SCALE
INTERMEDIATE SCALE
ALLOCATE DETECTED PITCH TO ONE OF 12 SCALE NOTES
ALLOCATE DETECTED PITCH TO ONE OF KEY SCALE NOTES
ALLOCATED DETECTED PITCH TO ONE OF INTERMEDIATE SCALE NOTES
ANY CHANGE BETWEEN LAST & CURRENT PITCHES
YES
NO
ARRIVED AT SPECIFIED POINT (GRID POINT)?
NO
YES
ADOPT LAST PITCH AS SCORE DATA
WRITE SCORE DATA
RETURN

FIG. 6

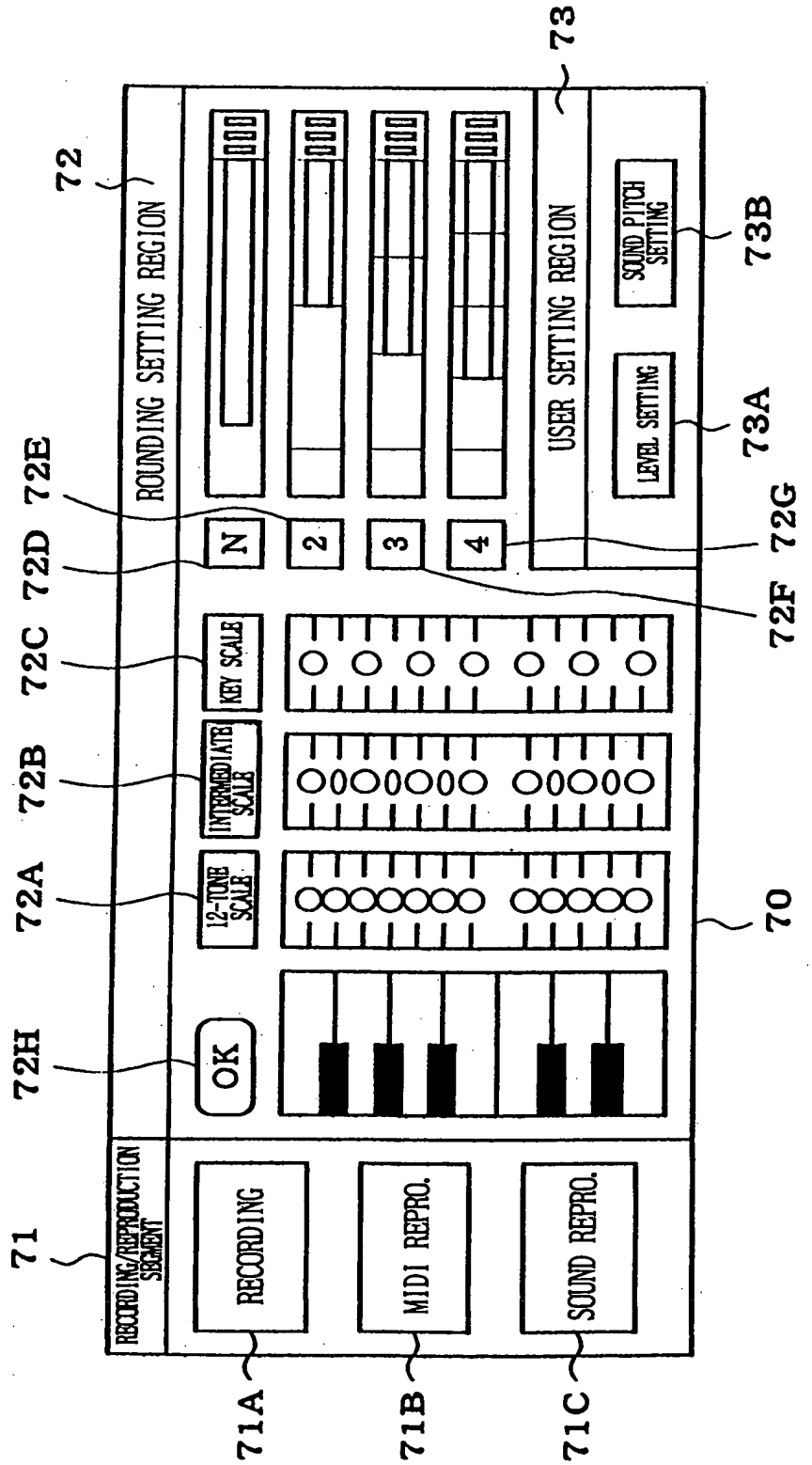
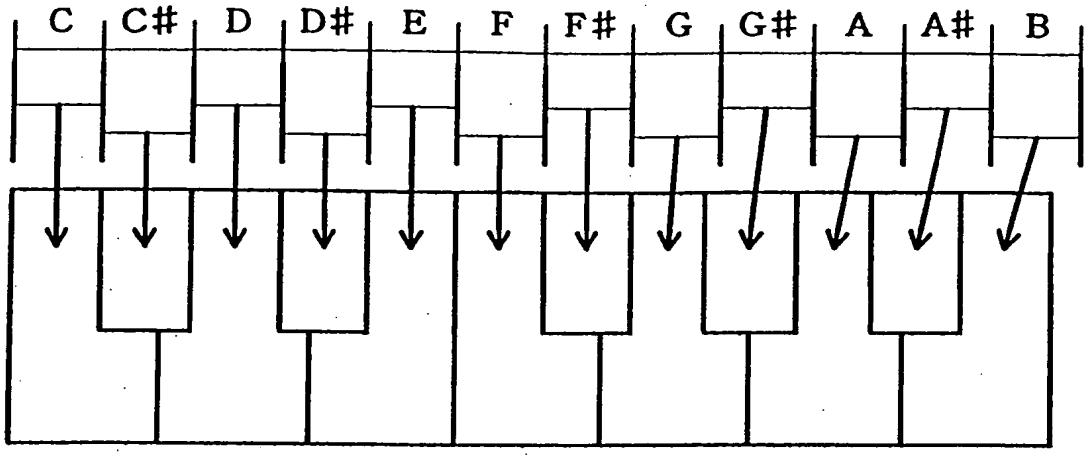
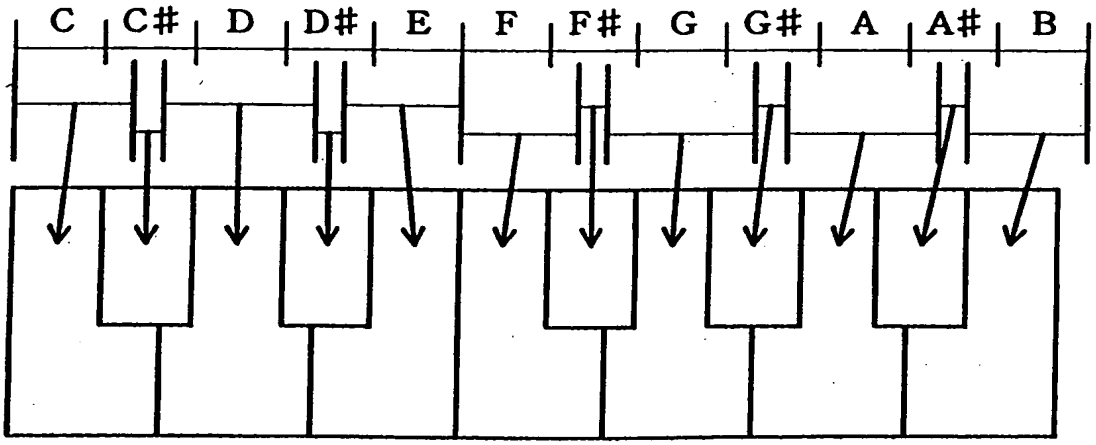

71
RECORDING/REPRODUCTION SEGMENT
RECORDING
MIDI REPRO.
SOUND REPRO.
71A
71B
71C
72
ROUNDING SETTING REGION
12-TONE SCALE
INTERMEDIATE SCALE
KEY SCALE
OK
N
2
3
4
72A
72B
72C
72D
72E
72F
72G
72H
70
73
USER SETTING REGION
LEVEL SETTING
SOUND PITCH SETTING
73A
73B

FIG. 7

(A)



(B)



(C)

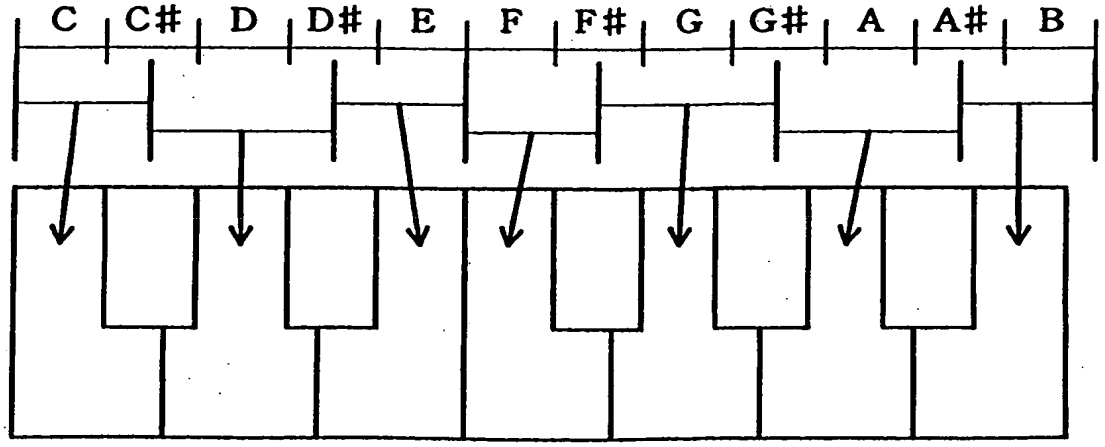


FIG. 8

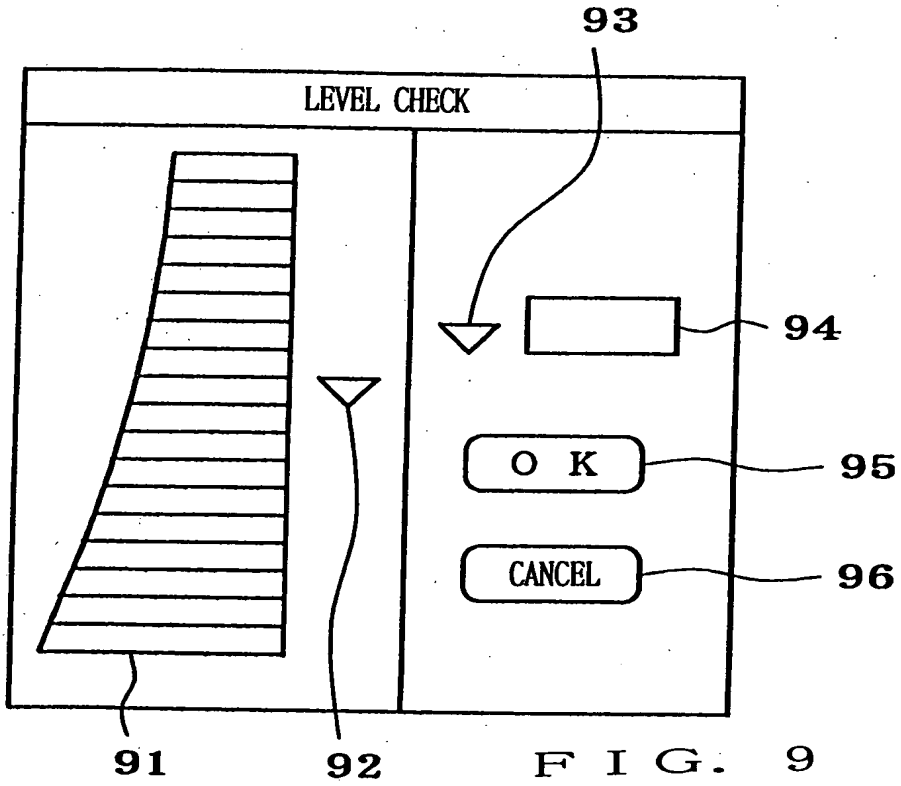


FIG. 9

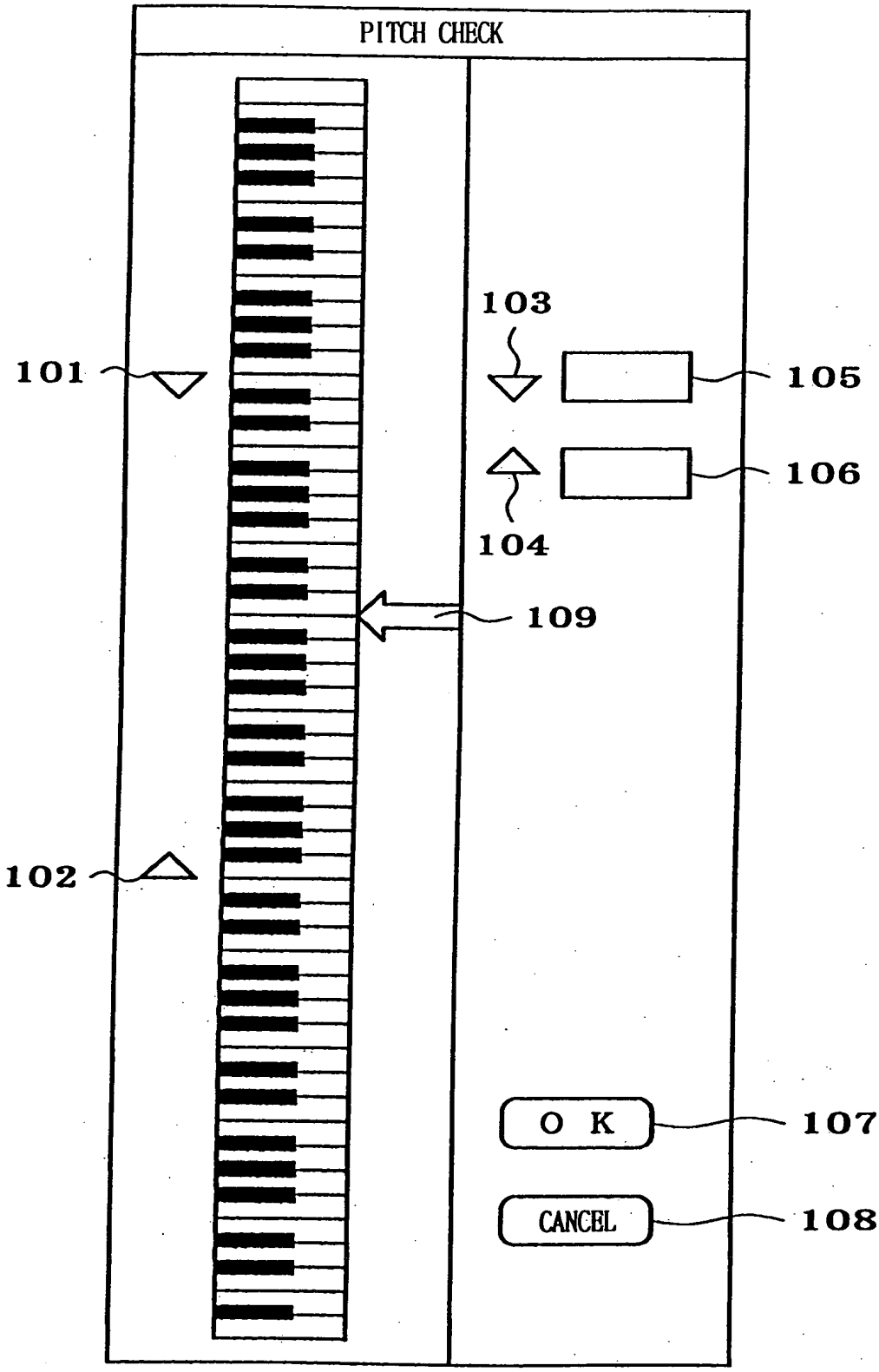


FIG. 10